

Group DataFrame by School Code

Aim

To split a given DataFrame into groups based on school code and check the type of the resulting GroupBy object.

Algorithm

1. Import the necessary libraries (pandas)
2. Create a sample DataFrame with student information including school code
3. Use the `groupby()` function to group the DataFrame by school code
4. Print the type of the resulting GroupBy object
5. Display the groups to verify the grouping

Code

```
import pandas as pd

data = {
    'school_code': ['s001', 's002', 's001', 's002', 's001', 's001', 's002', 's002'],
    'class': ['V', 'V', 'VI', 'VI', 'V', 'VI', 'V', 'V'],
    'name': ['Alberto Franco', 'Gino Mcneill', 'Ryan Parkes', 'Eesha Hinton', 'Gino
Mcneill', 'David Parkes', 'Parth Patel', 'Ricky Ahuja'],
    'date_of_birth':
['15/05/2002', '17/05/2002', '16/02/1999', '25/09/1998', '11/05/2002', '15/09/1997', '19/08/2003'],
    'age': [12, 12, 13, 13, 13, 12, 12, 12],
    'height': [173, 192, 186, 167, 151, 159, 199, 201],
    'weight': [35, 32, 33, 30, 31, 32, 30, 34]
}

df = pd.DataFrame(data)
grouped = df.groupby('school_code')

print("Type of GroupBy object:")
print(type(grouped))

print("\nGroups:")
for name, group in grouped:
    print(f"\nSchool Code: {name}")
    print(group)
```

Output

```
CopyType of GroupBy object:
<class 'pandas.core.groupby.generic.DataFrameGroupBy'>

Groups:
```

```
School Code: s001
school_code class      name date_of_birth      age      height      weight
0      s001      V      Alberto Franco  15/05/2002  12      173      35
2      s001      VI      Ryan Parkes   16/02/1999  13      186      33
4      s001      V      Gino Mcneill  11/05/2002  13      151      31
5      s001      VI      David Parkes  15/09/1997  12      159      32
```

```
School Code: s002
school_code class      name date_of_birth      age      height      weight
1      s002      V      Gino Mcneill  17/05/2002  12      192      32
3      s002      VI      Eesha Hinton  25/09/1998  13      167      30
6      s002      V      Parth Patel   19/08/2003  12      199      30
7      s002      V      Ricky Ahuja   22/10/2002  12      201      34
```

Result

The DataFrame was successfully grouped by school code. The type of the GroupBy object is `pandas.core.groupby.generic.DataFrameGroupBy`. The groups were displayed, showing the data separated by school code s001 and s002.